

CLAIMS:

1. A Hg-free metal halide lamp comprising a substantially cylindrical discharge vessel with a ceramic wall having an internal diameter D_i , an internal length L_i and a wall thickness W_t , and filled with an ionizable filling, wherein two electrodes are present having a mutual distance E_A for maintaining a discharge in the discharge vessel, wherein the filling comprises an inert gas and a metal halide, wherein the internal length L_i is smaller than 8 mm, wherein the electrode distance E_A and the internal diameter D_i comply with the relation $E_A/D_i > 2$, wherein the inert gas pressure P_{Xe} at room temperature is at least 5 bar, and wherein the wall thickness W_t and the internal diameter D_i comply with the relation $W_t/D_i > 0.15$.
2. A lamp according to Claim 1, wherein the length of the cylindrical outer surface of the discharge vessel L_o is at least 8 mm, preferably at least 9 mm.
3. A lamp according to Claim 1 or 2, wherein the metal halide comprises at least 40 :mol/cm³ of a rare earth iodide.
4. A lamp according to Claim 1, 2 or 3, wherein the metal halide comprises between 20 :mol/cm³ and 140 :mol/cm³ ZnI₂.
5. A lamp according to any one of the previous Claims 1 - 4, wherein $L_i < 7.5$ mm, preferably $L_i < 6.8$ mm, more preferably $L_i < 6.2$ mm.
6. A lamp according to any one of the previous Claims 1 - 5, wherein $E_A/D_i > 3$, preferably $E_A/D_i > 4$.
7. A lamp according to any one of the previous Claims 1 - 6, wherein $P_{Xe} > 10$ bar, preferably $P_{Xe} > 15$ bar.

8. A lamp according to any one of the previous Claims 1 - 7, wherein $Wt/Di > 0.2$, preferably $Wt/Di > 0.25$, more preferably $Wt/Di > 0.3$.

9. A lamp according to any one of the previous Claims 1 - 8, wherein the
5 discharge vessel is surrounded by a transparent substantially cylindrical gas filled outer bulb having its wall at a distance which is less than 1 mm, preferably less than 0.5 mm.

10. A lamp according to any one of the previous Claims 1 - 9, wherein the discharge vessel is provided with coated areas for increasing the coldest spot temperature.